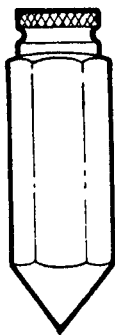


Chapter 11 PLUMB BOBS

HOW TO CHOOSE AND USE THEM

The "Types and Uses" pages provide you with a list of the more common types of plumb bobs. These pages should help you select the right plumb bob for the job. The "Using Plumb Bobs" pages tell you how to use a steel plumb bob to establish the true vertical of a square

post. By becoming familiar with this procedure you will build a good background for using other plumb bobs. The "Care" page tells you how to keep your plumb bobs in proper condition.



INDEX

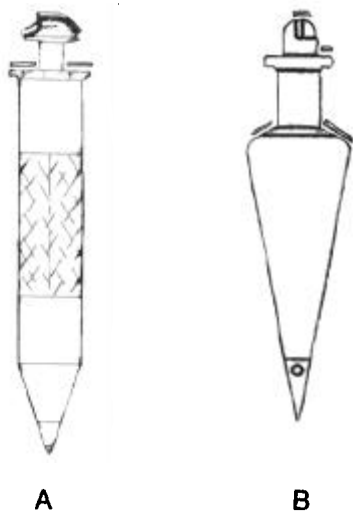
<i>Item</i>	<i>Page</i>
TYPES AND USES	11-2
Surveyor's Polished Brass	11-2
Solid Steel	11-2
USING	11-3
CARE	11-6

TYPES AND USES

PLUMB BOBS

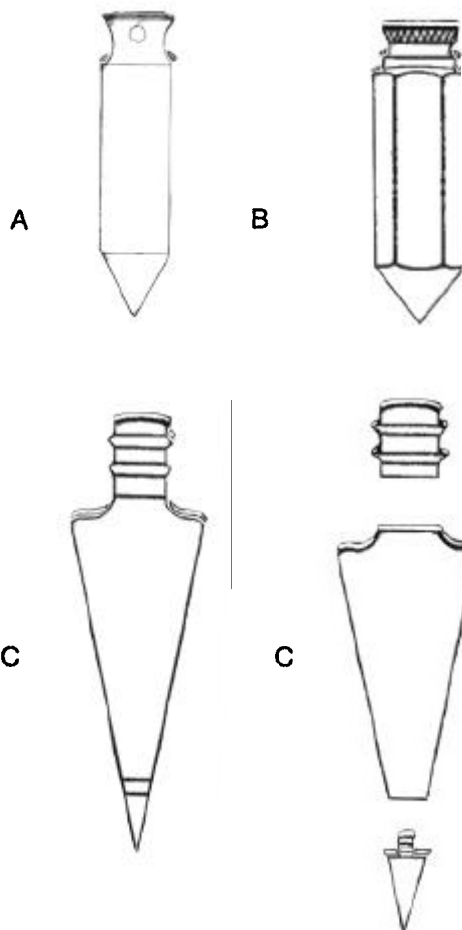
A plumb bob is a precision instrument used to establish a true vertical transfer and line-up reference point, and to take readings or soundings in tanks and voids. Plumb bobs are used by carpenters, surveyors and maintenance technicians.

SURVEYOR'S POLISHED BRASS



The surveyor's brass plumb bob may be either a spool type (A) or an adjustable cap type (B). Both types have replaceable steel points for increased accuracy. The adjustable cap allows the operator to make minor corrections to height and rotation to make sure the bob hangs straight. The surveyor's brass plumb bob comes with a minimum of 7 feet of nylon, silk or linen cord. It comes in 6, 8, 10, and 16 ounce sizes. The heavier plumb bobs are better for use in windy areas.

SOLID STEEL

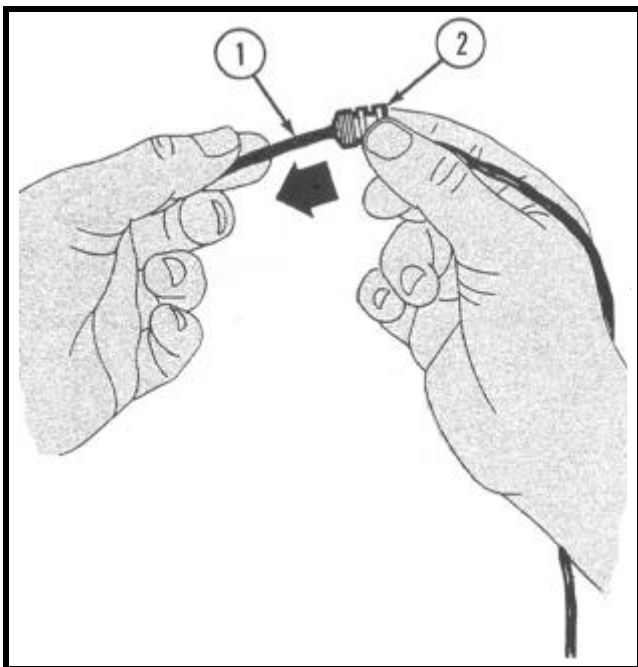


The solid steel plumb bob (A) may have a machined integral head, body, and point. It may have just a removable head (B), or a removable head and a replaceable point (C). It may be round or hexagonal in shape and it comes in 3, 8, and 12 ounce sizes. Cord for the solid steel bobs must be obtained from a separate source. This type plumb bob is used when extreme accuracy is not required.

USING A PLUMB BOB

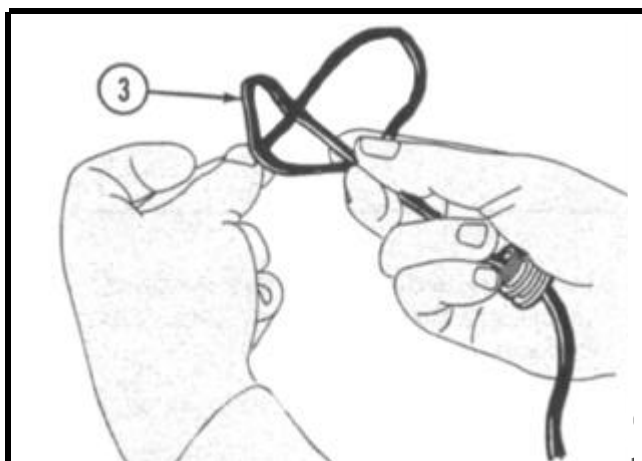
NOTE

The practice procedure which follows (for establishing the true vertical of a post) uses a plumb bob with a removable head.

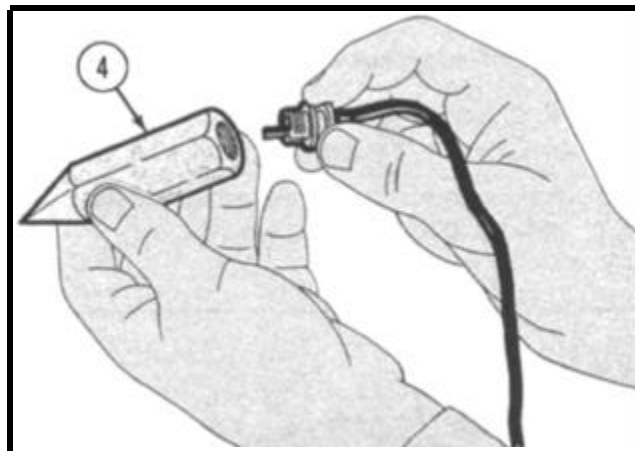


The first step is to attach the cord as follows:

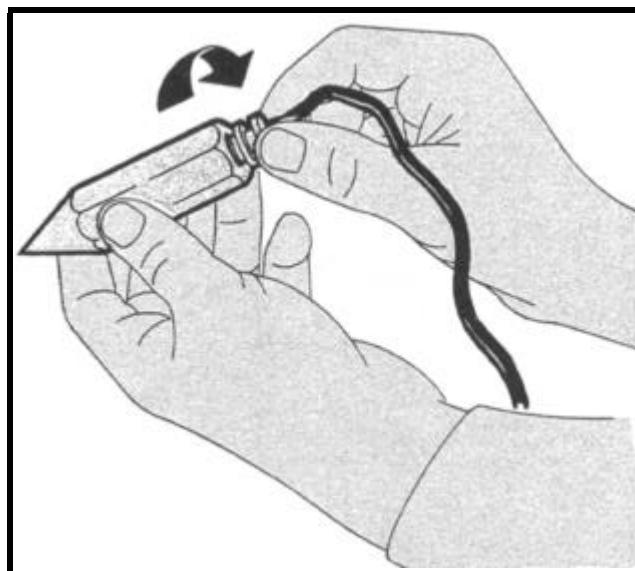
- 1 Insert a string or cord (1) into the cap (2) of the plumb bob. Make sure the cord will support the plumb bob. Pull the cord through the cap.



- 2 Place cap in the palm of your hand and tie an overhand knot (3) in the cord. Pull the cord drawing the knot against cap base. Make sure the knot is not too large or tied at an angle which would affect the hanging of the plumb bob.



- 3 Install cap into plumb bob body (4).



- 4 Tighten cap securely in the body and suspend the plumb bob by the cord only. Make sure the knot will support the plumb bob.

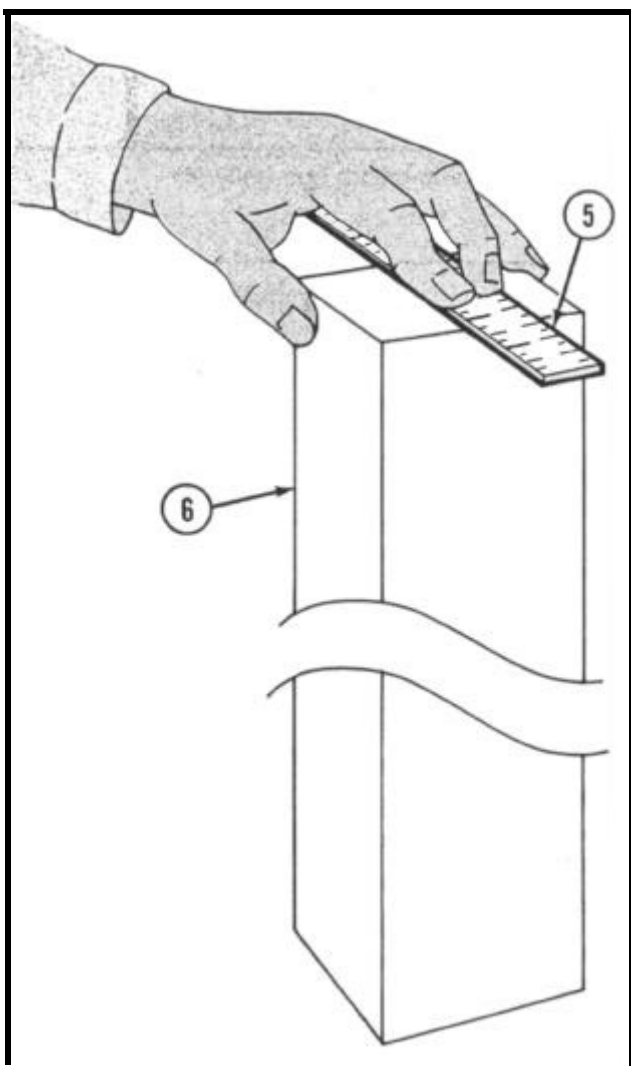
USING A PLUMB BOB - Continued

NOTE

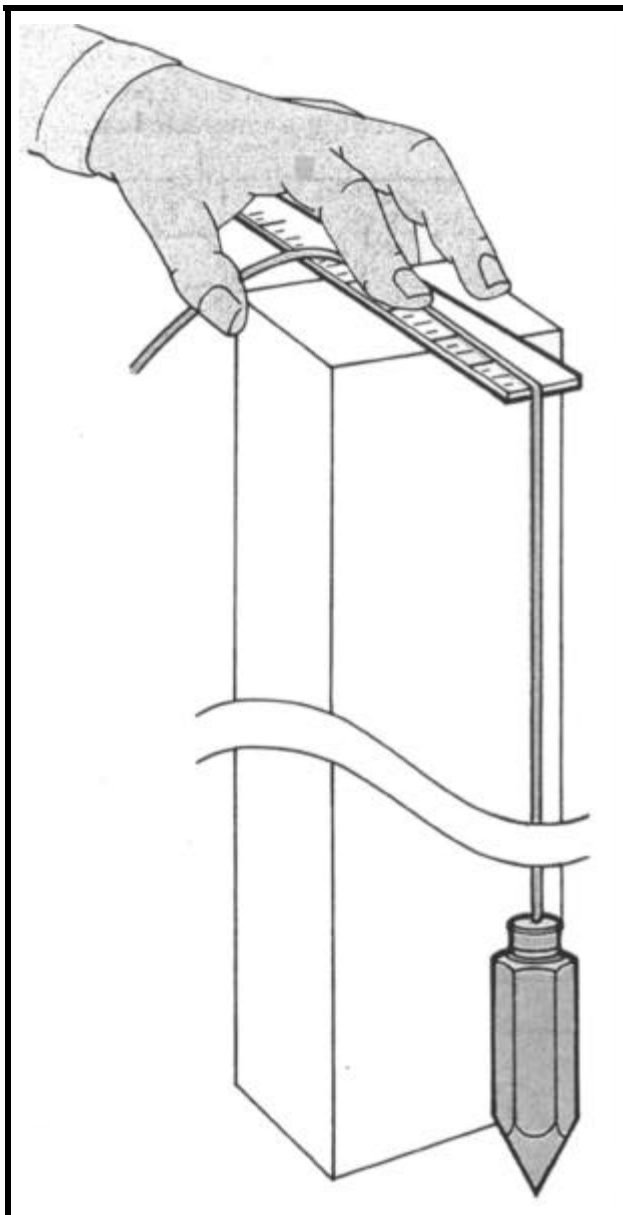
The following task is not the only use of a plumb bob.

NOTE

Post hole must be dug and an assistant is required before starting the task.

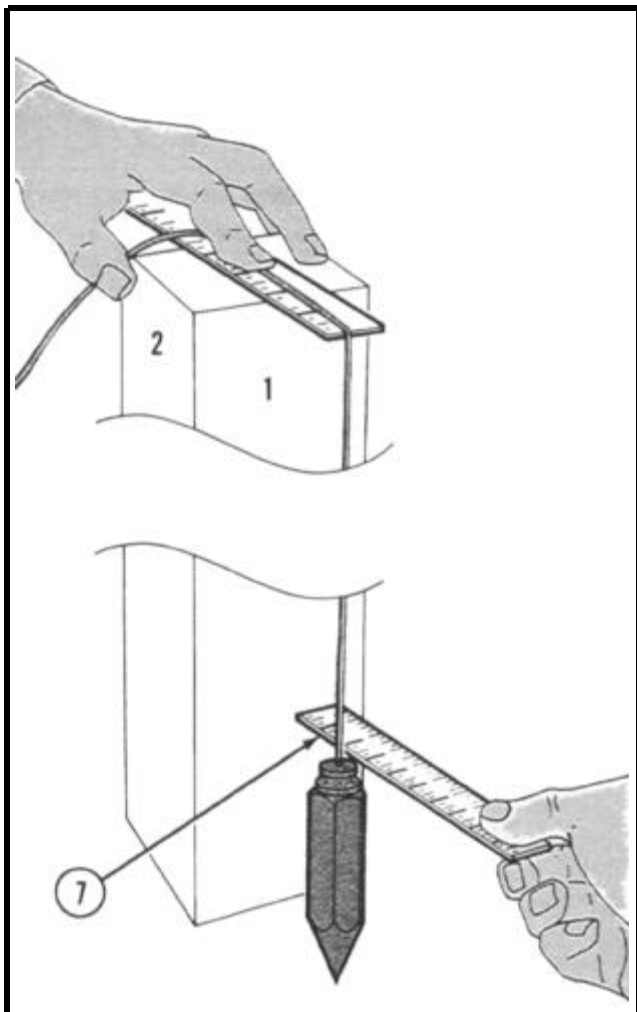


- 5** Place a ruler (5) on the top of the post (6) so that it extends 2 inches beyond an edge.

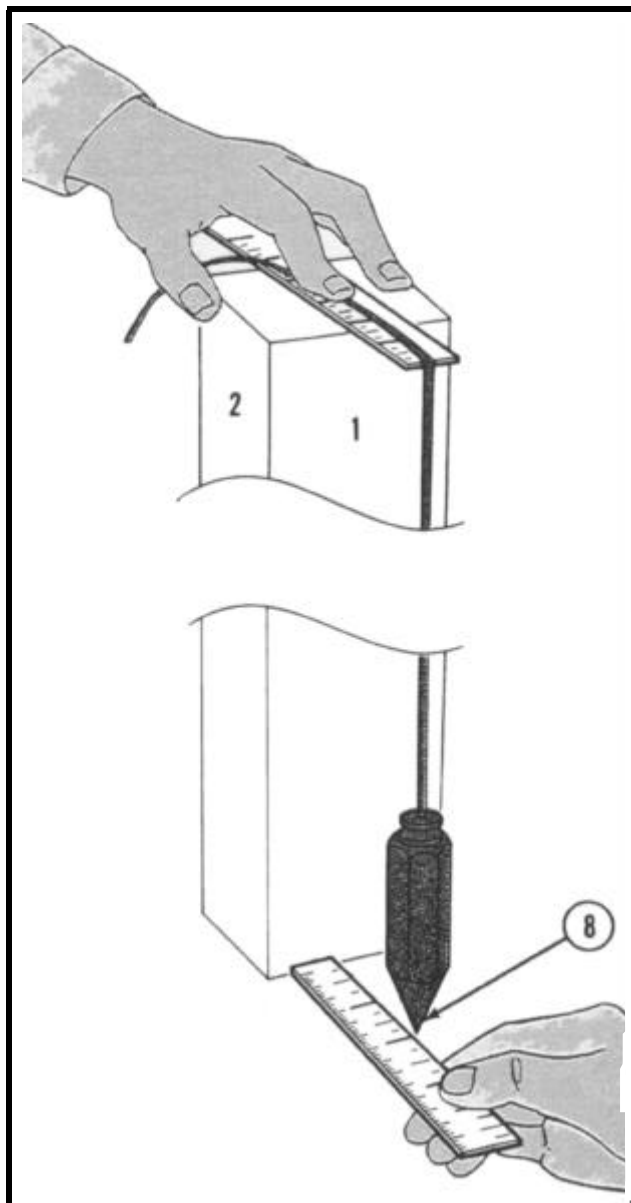


- 6** Hang string and plumb bob so they extend over end of ruler and the plumb bob is just above the ground surface.

USING A PLUMB BOB - Continued



- 7 Have the assistant measure distance (7) from post to string just above the plumb bob. It should read 2 inches. If it doesn't, move the base or the top of the post right or left until you get a 2-inch reading on both rules.



When extreme accuracy is desired, measurement would be taken to the point of the plumb bob (8). Repeat steps 5, 6, and 7 on side 2.

CARE OF PLUMB BOBS



Handle plumb bobs with care. Do not use a plumb bob as a hammer or lever. Lightly coat plumb bobs with lubricating oil for short periods of storage. For long-term storage, apply a heavy coat of oil and wrap the plumb bob in oil-soaked paper.

Store plumb bobs in a protective box in a dry place.

Make certain threads of removable caps (1) and points (2) are lightly coated with lubricant and placed in a protective box.